Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Information Systems Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

0400: Research, Development, Test & Evaluation, Defense-Wide

PE 0303610K: Teleport Program

BA 7: Operational Systems Development

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	2.054	5.217	6.880	0.000	6.880	6.824	6.150	5.706	5.623	Continuing	Continuing
NS01: Teleport Program	2.054	5.217	6.880	0.000	6.880	6.824	6.150	5.706	5.623	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department of Defense (DoD) Teleport program provides multi-frequency Military Satellite Communications (MILSATCOM) and Commercial Satellite Communications (COMSATCOM) to forward deployed tactical users requiring access to the Defense Information System Network (DISN) on demand. The DoD Teleports are the only system capable of providing this capability to forward deployed users over Commercial SATCOM (C-band and Ku-band) and MILSATCOM (X-band, Ka-band, Ultra High Frequency (UHF) and Extremely High Frequency (EHF)) and leverages improved DoD SATCOM and Global Information Grid (GIG) technologies to meet the connectivity, capacity, interoperability, availability, security, and throughput to meet Combatant Commands, Services, and Agency requirements.

The FY 2011 funding will provide system engineering, program management support and test activities to integrate the Advanced Extremely High Frequency (AEHF) and the Mobile User Objective System (MUOS) satellite systems' capabilities into the DoD gateway architecture.

Without these enhancements, the Teleport gateways and the DISN services provided to SATCOM users will be inaccessible to the warfighter using AEHF's greatly improved capability, preventing them from using the most high-speed, secure, and interoperable voice, data, and video networks. In addition, MUOS will not be backwards compatible with existing UHF SATCOM equipment and tactical users deployed in harm's way will be unable to efficiently communicate with one another and their commanders through existing legacy systems.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Information Systems Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0303610K: Teleport Program

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	2.054	5.239	0.000	0.000	0.000
Current President's Budget	2.054	5.217	6.880	0.000	6.880
Total Adjustments	0.000	-0.022	6.880	0.000	6.880
 Congressional General Reductions 		-0.022			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
 Reprogrammings 	0.000	0.000			
 SBIR/STTR Transfer 	0.000	0.000			
 Other Adjustments 	0.000	0.000	6.880	0.000	6.880

Change Summary Explanation

The FY 2010 decrement of -\$0.022 million reflect is due to Congressional taxes for Economic Assumption. The DoD did not estimate FY 2011 cost when the FY 2010 President's Budget was prepared.

Exhibit R-2A, RDT&E Project Ju	stification: P	3 2011 Defe	nse Informat	tion Systems	Agency				DATE: Feb	ruary 2010	
APPROPRIATION/BUDGET ACT 0400: Research, Development, To BA 7: Operational Systems Devel	est & Evaluatio	n, Defense-I	Wide		IOMENCLA 0K: Teleport			PROJECT NS01: Tele	port Progran	1	
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
NS01: Teleport Program	2.054	5.217	6.880	0.000	6.880	6.824	6.150	5.706	5.623	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

DoD Teleport Generation One added Commercial SATCOM and expanded the MILSATCOM terminal, baseband equipment, and serial circuit based network services segment capabilities to six Standard Tactical Entry Point (STEP) sites to increase the throughput and functional capabilities of those sites. DoD Teleport Generation Two expanded the capacity and capabilities of all DoD Teleport facility segments and installed a converged router Net-Centric suite of equipment to allow for the use of Internet Protocol (IP) for enhanced network interoperability and enable dynamic satellite bandwidth allocation to reduce satellite lease costs and increase overall performance.

Building upon DoD Teleport Generations One and Two, DoD Teleport Generation Three (Gen 3) Satellite Gateway Enhancements (SGE) will take full advantage of state-of-the-art SATCOM radio frequency (RF), Information Assurance (IA) and packet routing/switching baseband technologies to deliver IP voice, video, and data services to the warfighter via a reliable, secure, and responsive converged Net-Centric IP architecture. Teleport's SGE will integrate the Advanced Extremely High Frequency (AEHF) and the Mobile User Objective System (MUOS) satellite systems' capabilities into the DoD gateway architecture beginning FY 2010.

B. Accomplishments/Planned Program (\$ in Millions)

		i i			
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Teleport Program	2.054	5.217	6.880	0.000	6.880
FY 2009 Accomplishments: FY 2009 Accomplishments: FY 2009 funding provided warfighters access to DISN services using an initial Net-Centric, IP-based architecture to meet the Combatant Commands, Services, Agency, and deployed warfighter needs. Funding allowed for improving maintainability, fielding Teleport Management and Control System (TMCS) Build 4.1 to provide remote monitoring facilitated through secure connectivity over Secret Internet Protocol router Network (SIPRNet), and implemented UHF to DISN access. Postured the program for a successful Multi-Service Operational Test and Evaluation					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Defense Information Systems Agency

DATE: February 2010

FY 2011

Base

FY 2011

OCO

FY 2011

Total

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

FY 2010

FY 2009

0400: Research, Development, Test & Evaluation, Defense-Wide

PE 0303610K: Teleport Program

NS01: Teleport Program

BA 7: Operational Systems Development

B. Accomplishments/Planned Program (\$ in Millions)

(MOT&E) by enhancing the knowledge and skill set of the system operators during Scenario Based Training (SBT) and Developmental test events. Completed Ka terminal and IP/Net-Centric installation, integration and testing.

FY 2010 Plans:

System Engineering & Program Management (SEPM) will continue Teleport's technology refreshment schedule to include: installation of Joint IP Modems (JIPM) to encrypt Transmission Security (TRANSEC) and comply with DoD standardization; upgrading Net-Centric baseband and IP modem software and firmware; deployment of TMCS Build 5.0 to enhance security; DISN service enhancements; and UHF integrated waveform upgrades. Following a Material Development Decision (MDD) in 3QFY10, the program office will execute the Gen 3 acquisition plan to purchase commercialoff-the-shelf (COTS) and Government-off-the-shelf (GOTS) equipment to integrate with the Teleport system's architectural design. The Navy's multi-band's first article terminals will be purchased and prepared for testing requirements at the test bed. SEPM will support this effort to initiate the Gen 3 enhancements for increased warfighter capabilities by providing users of the current UHF system with improved service and complete interoperability with the MUOS legacy payload, to ensure a smooth transition to the next generation of mobile user equipment. These efforts support premilestone decision documentation and acquisition planning for Gen 3 in the following functional areas: systems engineering, network and security engineering, test support, system integration and implementation, configuration management support, logistics and safety support, program and acquisition management.

FY 2011 Base Plans:

In FY 2011, SEPM efforts continue by enabling tactical-to-tactical SATCOM voice communications between warfighters using the current UHF system and future warfighters using MUOS. The program will continue with insertion of technology refreshment schedule to maintain existing capabilities. Final tests for MUOS-DISN will be completed for initial operational capability at two sites; the third site will begin installation and test. Site preparations and installation begins for AEHF (XDR) Terminals and

UNCLASSIFIED

R-1 Line Item #210 Page 4 of 10

Exhibit R-2A, RDT&E Project Justification: PB 2011 Defense Information Systems Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

0400: Research, Development, Test & Evaluation, Defense-Wide

PE 0303610K: Teleport Program

NS01: Teleport Program

BA 7: Operational Systems Development

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
baseband equipment. MUOS-to-Legacy installation and test begins at the Teleport Program Office (TPO) test lab. TPO installation planning begins on the fourth enhancement, WGS X/Ka Terminals.					
The benefit of these activities will allow Teleport gateways and the DISN services provided to SATCOM users to be accessible to the warfighter using AEHF's greatly improved capability of the most high-speed, secure, and interoperable voice, data, and video networks. In addition, MUOS will be compatible with existing UHF SATCOM equipment, and tactical users deployed in harm's way will be able to efficiently communicate with one another and their commanders through existing legacy systems.					
Accomplishments/Planned Programs Subtotals	2.054	5.217	6.880	0.000	6.880

C. Other Program Funding Summary (\$ in Millions)

		•	FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• O&M/0303610K: <i>O&M</i>	9.074	11.940	19.827		19.827	21.471	21.367	21.972	22.841	Continuing	Continuing
• PROCUREMENT,	15.418	67.731	78.227		78.227	55.610	48.593	60.705	60.814	Continuing	Continuing

DW/0303610K: PROCUREMENT,

DW

D. Acquisition Strategy

The TPO utilizes the DoD preferred evolutionary acquisition approach to acquire Commercial off-the-shelf (COTS) modified COTS, and Government-off-the-shelf (GOTS) equipment when possible. The two TPO procuring agencies, Program Manager Defense Communications and Army Transmission Systems (PM DCATS), and the Space and Naval Warfare Systems Command (SPAWAR) provide direct contracting support. Required assistance from other Departments including Army, Navy, and Air Force is acquired via Military Interdepartmental Purchase Request (MIPR) for both organic and contracted support.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Defense Information Systems Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0303610K: Teleport Program

PROJECTNS01: Teleport Program

E. Performance Metrics

Teleport manages and tracks its cost and schedule performance parameters using a tailored Earned Value Management System (EVMS) process, integrating the program plan, the program schedule, Work Breakdown Structure (WBS), and financial data. Progress is monitored/documented monthly showing percentages complete for schedule and cost. Formal updates with changes to the schedule are documented against the program baseline.

- 1) Teleport will integrate Ka (8 legacy links) and IP over SATCOM capability that dynamically allocates satellite bandwidth utilizing existing COTS IP modems (Gen 2 Phase 1) and integrate an open standard IP modems (Digital Video Broadcast-Satellite (2nd generation) / Return Channel via Satellite (DVB-S2/RCS) hubs). Gen 2 upgrades for coverage/capacity requirement.
- FY 2009: As of 4QFY09 Gen 2 implementation is 91 percent complete, awaiting full wideband constellation.
- FY 2010: Performance metrics for Generation 3 will be established after this increment has an approved baseline in the 2QFY10 timeframe.
- FY 2011: Performance metrics for Generation 3 will be established after this increment has an approved baseline in the 3QFY10 timeframe.
- 2) Throughput of 500 (nominal Mbps per site) for satellite communications and 319 Mbps for DISN. Maintain load levels and quality of service for users during transition period. Perform technology refreshment of existing COTS hardware and software.
- FY 2009: As of 4QFY09 Gen 2 implementation is 100 percent complete, awaiting full wideband constellation.
- FY 2010: Performance metrics for Generation 3 will be established after this increment has an approved baseline in the 2QFY10 timeframe.
- FY 2011: Performance metrics for Generation 3 will be established after this increment has an approved baseline in the 3QFY10 timeframe.
- 3) Access to C, X, Ku, UHF, EHF, and Ka bands. Provide sustainment/technology refresh to upgrade: (1) Net-centric baseband Performance Enhancing Proxies, (2) modem software and firmware, and (3) EHF baseband hardware and software. Will complete DISN service enhancements.
- FY 2009: As of 4QFY09 implementation is 80 percent complete, coverage exists where satellites are available.
- FY 2010: Performance metrics for Generation 3 will be established after this increment has an approved baseline in the 2QFY10 timeframe.
- FY 2011: Performance metrics for Generation 3 will be established after this increment has an approved baseline in the 3QFY10 timeframe.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Defense Information Systems Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development

PE 0303610K: Teleport Program

NS01: Teleport Program

Support (\$ in Millions)

				FY 2	2010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contracted Systems Engineering and Program Management (SE/PM) Support	C/CPFF	Booz Allen & Hamilton Fairfax, VA	26.627	2.800	Mar 2010	2.729	Mar 2011	0.000		2.729	0	32.156	32.156
Contracted Systems Integration and Program Management Support	MIPR	STF SPAWAR	2.749	0.577	Jan 2010	0.562	Jan 2011	0.000		0.562	0	3.888	3.888
Contracted SE/PM Support	TM	SAIC SAIC	0.099	0.079	Mar 2010	0.078	Mar 2011	0.000		0.078	0	0.256	0.256
Contracted Systems Engineering and Program Management (SE/PM) Support 2	C/FFP	Wexford Wexford	0.000	0.483	Jan 2010	0.471	Oct 2011	0.000		0.471	0	0.954	0.954
MUOS Contracted Systems Engineering and Program Management (SE/PM) Test Support	TBD/TBD	TBD TBD	0.000	0.000		1.790	Jan 2011	0.000		1.790	0	1.790	1.790
	-	Subtotal	29.475	3.939		5.630		0.000		5.630	0.000	39.044	39.044

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Defense Information Systems Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0303610K: Teleport Program

PROJECT

NS01: Teleport Program

Test and Evaluation (\$ in Millions)

				FY 2	010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test and Evaluation Support	MIPR	JITC Ft. Huachuca	7.234	1.278	Feb 2010	1.250		0.000		1.250	Continuing	Continuing	Continuing
		Subtotal	7.234	1.278		1.250		0.000		1.250			

Remarks

	Total Prior Years Cost	FY 2010		2011 ise	FY 2	-	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	36.709	5.217	6.880		0.000		6.880			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Defense Information Systems Agency

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0303610K: Teleport Program

PROJECT

NS01: Teleport Program

DATE: February 2010

	ı	Y :	200	9	FY 2010			0	FY 2011			1	FY 2012			2	FY 2013			3	FY 2014			4	FY 2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Generation One - IOC4 Testing																												
Generation One - IOC4 Testing 2																												
Generation One - IOC4 (Ka Integration)																												
Generation Two (Ka & Net-centric Capability) DT&E & FOT&E																												
Generation Two (Ka & Net-centric Capability) DT&E & FOT&E 2																												
Generation Two FOC																												
Technology Refresh (DoD Teleport System) Eng. and Test																												
Generation Three (Satellite Gateway Enhancement) - Milestone Decision Material Development Decision (MDD) for entry into acquisition phase.																												

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Defense Information Systems Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0303610K: Teleport Program

PROJECT

NS01: Teleport Program

Schedule Details

	St	art	E	nd
Event	Quarter	Year	Quarter	Year
Generation One - IOC4 Testing	2	2009	1	2010
Generation One - IOC4 Testing 2	4	2009	1	2010
Generation One - IOC4 (Ka Integration)	2	2010	2	2010
Generation Two (Ka & Net-centric Capability) DT&E & FOT&E	2	2009	1	2010
Generation Two (Ka & Net-centric Capability) DT&E & FOT&E 2	4	2009	1	2010
Generation Two FOC	2	2010	2	2010
Technology Refresh (DoD Teleport System) Eng. and Test	2	2009	2	2011
Generation Three (Satellite Gateway Enhancement) - Milestone Decision Material Development Decision (MDD) for entry into acquisition phase.	3	2010	3	2010